

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 22 DEC 2004

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Applicant's or agent's file reference 501687/WTM	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416).
International Application No. PCT/AU2003/000999	International Filing Date (day/month/year) 7 August 2003	Priority Date (day/month/year) 7 August 2002
International Patent Classification (IPC) or national classification and IPC Int. Cl. ⁷ G01R 33/022, 33/00, 33/035		
Applicant COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION et al		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 3 sheets, including this cover sheet.
- ☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
- These annexes consist of a total of sheet(s).
3. This report contains indications relating to the following items:
- I ☒ Basis of the report
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

Date of submission of the demand 9 March 2004	Date of completion of the report 13 December 2004
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer Mani Ramachandran Telephone No. (02) 6283 2233

I. Basis of the report**1. With regard to the elements of the international application:***

- ☒ the international application as originally filed.
- ☐ the description, pages , as originally filed,
pages , filed with the demand,
pages , received on with the letter of
- ☐ the claims, pages , as originally filed,
pages , as amended (together with any statement) under Article 19,
pages , filed with the demand,
pages , received on with the letter of
- ☐ the drawings, pages , as originally filed,
pages , filed with the demand,
pages , received on with the letter of
- ☐ the sequence listing part of the description:
pages , as originally filed
pages , filed with the demand
pages , received on with the letter of

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/fig.

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 3-19, 22-72	YES
	Claims 1, 2, 20, 21	NO
Inventive step (IS)	Claims 3-18, 22-37, 40-54, 56-72	YES
	Claims 1, 2, 19-21, 38, 39, 55	NO
Industrial applicability (IA)	Claims 1-72	YES
	Claims	NO

2. Citations and explanations (Rule 70.7)

NOVELTY & INVENTIVE STEP Claims 1-72

D1 - US 5357802 A (HOFMEYER et al) 25 October 1994

D2 - GB 2258314 A (DORNIER GmbH) 3 December 1993

D3 - US 5469056 A (ESCHNER et al) 21 November 1995

The independent claims are method claims 1 and 39, and device claims 20 and 55. The invention deals with controllably altering the position of gradiometers (field vector sensors) with respect to the magnetic field. In claims 1 and 20, there are at least two gradiometers connected in a differencing arrangement and in claims 39 and 55 there are at least three gradiometers and the axis of each of them is not parallel to the axes of the other two.

In Fig. 3A of D1, we see the gradiometer assembly comprising several accelerometers pointing in different directions, and on being displaced, the signals outputted by each of them differ. The differencing arrangement of claims 1 and 20 are anticipated here and lack novelty. Also as seen from Fig. 1 of the citation, accelerometers 36 and 36A are axially aligned along the X axis. The subject matter of appended claims 2 and 21 are also thus not novel, and lacking an inventive step.

Three dimensional gradiometer structures are depicted in D2 and D3 wherein the three or more gradiometers lie in non-parallel, non-orthogonal planes. It would be well within the expertise of a skilled addressee to combine the teachings of D2 or D3, with that of D1. This would render claims 39 and 55 to lack an inventive step. Also appended claims 19 and 38 in their appendancy to claims 1 and 20 respectively, recite the same features as claims 39 and 55, so they lack an inventive step too.